

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q81029

Hiroyuki SHINODA, et al.

Appln. No.: 10/822,095

Group Art Unit: 2419

Confirmation No.: 2192

Examiner: Venkatesh N HALIYUR

Filed: April 12, 2004

For: COMMUNICATION APPARATUS, COMMUNICATION DEVICE, METHOD FOR  
CIRCUIT BOARD IMPLEMENTATION, AND TACTILE SENSOR

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

**MAIL STOP AF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to the Pre-Appeal Brief Conference Pilot Program, and further to the Examiner's Office Action dated July 10, 2009, Applicant files this Pre-Appeal Brief Request for Review. This Request is also accompanied by the filing of a Notice of Appeal.

Claims 1-7, 9-16, 18, and 47-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Burgess (U.S. Patent 5,695,859) and Reeb (U.S. Patent 4,792,790) and further in view of Steigerwald et al. (U.S. Patent 5,912,809). Applicants respectfully traverse.

Burgess does not teach a first and second conductive layer having a plurality of communication elements connected there between, as specifically recited in claim 1. Claim 1 describes plural communication units connected to the first conductive layer and the second conductive layer, wherein the first communication element of the plurality of communication elements initiates transmission to a second communication element of the plurality of elements.

The Examiner cites to Fig. 10 and col. 14 of Burgess to teach this aspect of the claims. In general, Burgess relates to a sensor pad, formed with a first and second conductive layer. The sensor pad is used to switch machinery on and off on the floor of a factory. Contact between the first and second conductive layer, through a pressure-sensitive layer, acts as a switch to trigger machinery on and off. The cited Fig. 10 and column 14 of Burgess discusses the disposition of a cone shaped member 72a which becomes deformed under the weight of a factory worker. The deformed cone comes into contact with the electrical member 74a. The direction of displacement (as made evident with the electrical signal of the member 74a to underlying electrode 74b) helps determine magnitude and shear direction. By contrast, the downward force depends on the magnitude of voltage between the member 74c and electrode 77. It is apparent that no arrangement of the various conductor elements 74a-c and 77 can meet the requirements of the first and second conductive layers described in claim 1, having plural communication elements connected thereto. For example, plural elements 74a are not connected to any element that comprise first and second conductors and do not communicate with other plural elements.

Applicants maintain that Burgess also fails to disclose “letting the second communication element to acknowledge a change in the voltage propagated around the first communication element as a signal,” as recited in claim 1. No part of col. 14 describes that the second communication element acknowledges a change in voltage propagated around the first communication element as a signal. As discussed above, the electrodes 74a simply do not communicate information with each other. In fact, since the cone 72a will deform in only a

particular direction under weight of a user, only one of such electrodes 74a will ever be activated by the individual cone 72a. Therefore, the rejection is incorrect for at least these reasons.

The Applicant additionally submits that the rejection improperly combines features of Burgess' Figs. 1, 2 and 10 in rejecting claim 1. See Office Action, page 3, which cites first to col. 14, lines 11-32 and Fig. 10, then immediately thereafter to col. 4, lines 60-67, col. 5, lines 1-27 and Fig. 1. Different embodiments cannot be combined without motivation to do so. In re Kramer, 18 USPQ2d 1415, 1416 (Fed. Cir. 1991); Ex parte Beuther, 71 USPQ2d 1313, 1316 (BPAI 2003).

The Examiner concedes that Burgess fails to teach a second communication element is assigned an ID identifying the element and that the communicated signal includes an ID identifying a recipient communication element to subsequently receive a signal. The Examiner cites Reeb to make up this deficiency. However, Reeb does not disclose where "the signal includes an ID identifying a recipient communication element." Reeb is clearly unrelated to the present invention and is also clearly unrelated to the primary Burgess reference. More particularly, Reeb relates to forming an RC resonance circuit in a simple form to tag articles. The emission of the RC frequency helps keeps items, such as items in a store, secure against theft. See Reeb, col. 1, lines 11-21; col. 2, lines 40-45. The Examiner's citation to col. 19 and Fig. 30 of Reeb merely describes the adjustability of the RC signal. Even assuming *arguendo* that the RC emissions of Reeb comprise an ID, they do nothing to identify a recipient of a signal. The tags (alleged communication elements with ID) of Reeb also clearly are not attached to first and second conductive layers in any manner as required by claim 1. There would simply be no

basis to make such a connection to common first and second conductor layers in Reeb. The Examiner has failed to provide any motivation to include a tag identifier of Reeb with the pressure sensor pad of Burgess.

The Examiner also concedes that Burgess and Reeb fail to teach plural communication elements placed for communication without individual conductive wires. The Examiner newly cites to the printed circuit board (PCB) of Steigerwald to make up for this deficiency. However, Steigerwald does not teach placing communication elements for communication without individual conductive wires, as Steigerwald is still a PCB which requires conductive wires to connect the various IC chips on the PCB (*See* Steigerwald, Figs. 4A, 4B, element 402; also col. 7, lines 33-36). The Applicants also note that Steigerwald does not disclose the use of communication elements that would be placed for communication without individual wires, since Steigerwald is only concerned with connecting IC chips on a PCB.

With regard to claims 4 and 13, these claims describe that the ID includes the originating source. No aspect of Reeb requires this feature. For example, in order to prevent theft (removal of an article from a store), it is not necessary to know the source of a signal. It is sufficient to know that one (of many) tagged articles is being removed. Therefore, there is no requirement in Reeb that the originating source ID be included in the signal. Claims 4 and 13 are patentable.

With regard to claim 5 and 14, these claims describe communication among neighboring communication elements. The Examiner cites cols. 2 and 15 of Burgess as teaching this feature. The cited col. 2 merely teaches generally the more detailed embodiment of Fig. 10, col. 14. As discussed above, any electrode 74a-c does not communicate with neighboring communication

units connected to conductive layers. At best, 74a communicates with electrode 74b, and electrode 74c communicates with electrode 77. However, these various electrodes do not meet the connection to the (common) first and second conductive layers as required by the base claim.

With further regard to claim 47, this claim specifies that the plural communication elements do not overlap each other in the direction of disposition of the first and second layers. The Examiner cites a vertical stack of Burgess to teach features of claim 47. However, the cited portion of Burgess teaches the exact opposite of claim 47. Claim 49 is patentable for analogous reasons. The Examiner cites to Burgess at col. 10, lines 57-65, as teaching the features of claim 51, which recites the same features of claims 47 and 49. However, this section of Burgess also fails to describe where elements are laterally spaced so as to not overlap each other in a direction of disposition of the first and second conductive layers. It is clear that elements 74a and 74b-c of Fig. 10 of Burgess must overlap each other in order for the Burgess device to operate.

For all of the reasons set forth above, we believe the rejection under 35 U.S.C. § 103(a) is improper. In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

Respectfully submitted,  
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